

***Morula rodgersi* n.sp., a new Muricidae (Rapaninae) from Guam**

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ABSTRACT. *Morula rodgersi* n.sp. is described from western Guam and is included in a group of species with a small, spiny shell. It is compared to other members of that group, namely *M. angulata* (Sowerby, 1893), *M. echinata* (Reeve, 1846), and *M. cernohorskyi* Houart & Tröndle, 1997.

RESUME. Une nouvelle espèce, *Morula rodgersi* n.sp., est décrite de l'île de Guam et est comprise dans un groupe d'espèces possédant une petite coquille épineuse. Dans ce groupe, elle est comparée à *M. angulata* (Sowerby, 1893), *M. echinata* (Reeve, 1846), et *M. cernohorskyi* Houart & Tröndle, 1997.

INTRODUCTION

In my current classification, *Morula* Schumacher, 1817 includes 18 or 19 species. These species live from the intertidal zone to approximately 10 m deep in the Indo-West Pacific. Only one species, *Morula nodulosa* (C.B. Adams, 1845) occurs in both the eastern and western Atlantic.

Morula rodgersi n.sp. is included in a group of small species with spiny shell morphology, not exceeding 12 mm in length. Other members of that group are *M. echinata* (Reeve, 1846), *M. parva* (Reeve, 1846), *M. angulata* (Sowerby, 1893), and *M. cernohorskyi* Houart & Tröndle, 1997.

Abbreviations.

MNHN : Muséum national d'Histoire naturelle, Paris.

Text conventions.

P1 : Shoulder cord.

P2-P3 : Primary cords of the convex part of the teleoconch whorls.

IP : Infrasutural primary cord (primary cord on shoulder).

IS : Infrasutural secondary cord (secondary cord on shoulder).

ID : Infrasutural apertural denticle.

D1-D4 : Abapical apertural denticles.

ADP : Adapertural primary cord on the siphonal canal.

MP : Median primary cord on the siphonal canal.
 (based on Merle, 1999)

SYSTEMATICS

Family MURICIDAE Rafinesque, 1815

Subfamily RAPANINAE Gray, 1853

Genus *Morula* Schumacher, 1817

Type species : *Morula papillosa* Schumacher, 1817, by monotypy = *Morula uva* (Röding, 1798), Recent, Indo-West Pacific.

***Morula rodgersi* n.sp.**

Figs 1-3

Type material.

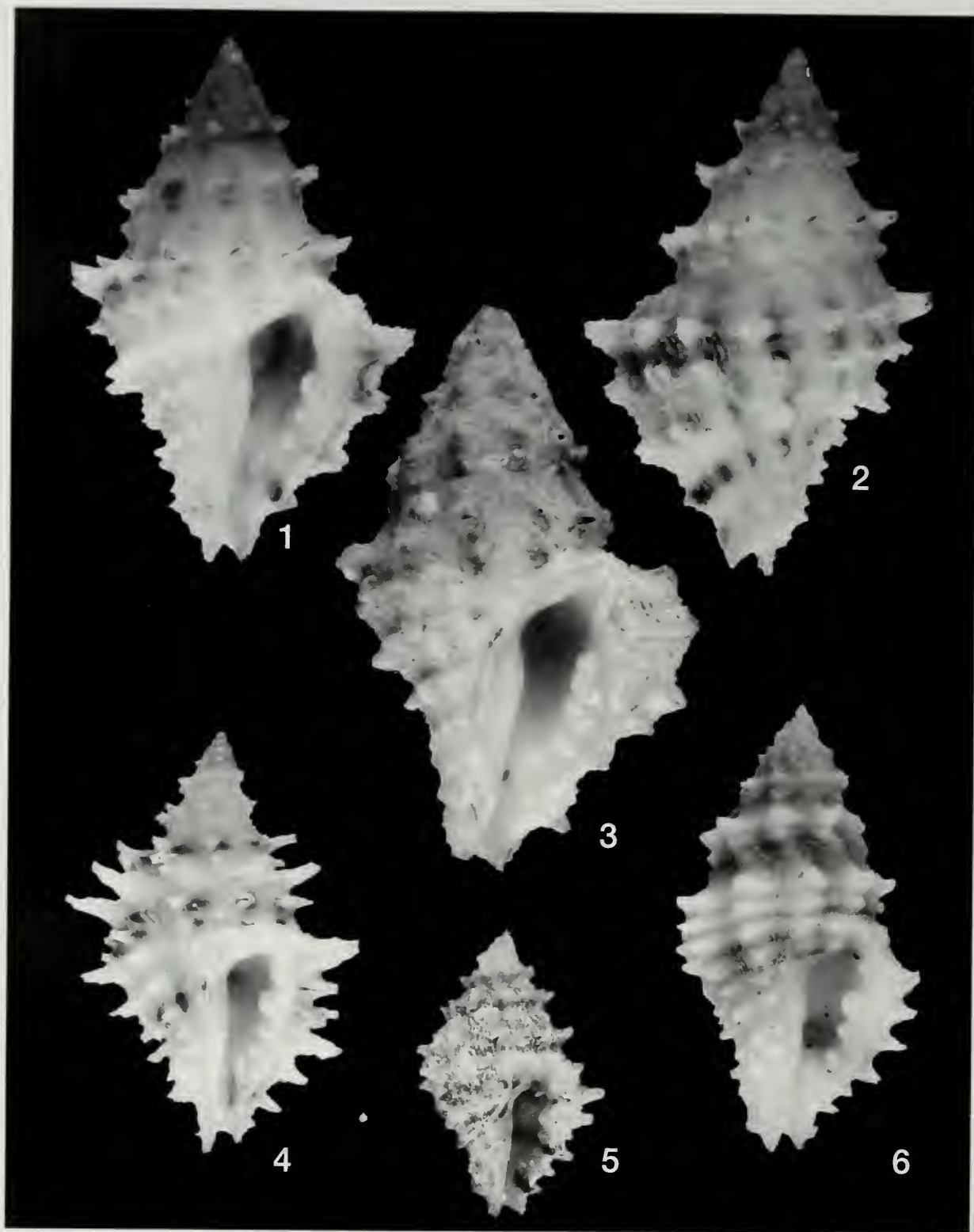
Guam, Piti Lagoon, 6-9 m, among rocks, holotype MNHN, 1 paratype coll. F. Schroeder; Guam, Agat Bay, 4.5-7.5 m, among silty rocks, 2 paratypes (1 juvenile and 1 adult), coll. R. Houart.

Distribution.

Western Guam, Agat Bay and Piti Lagoon, living at 4.5-9 m, among rocks (Fig. 7).

Description.

Shell small, up to 11.8 mm in length at maturity (paratype F. Schroeder), biconical, spinose. Spire high, acute, with 3.25 - 3.5 protoconch whorls and up to 6 broad, strongly shouldered, spinose teleoconch whorls. Suture strongly adpressed. Protoconch small, conical, acute, with a narrow keel abapically on penultimate and last whorl. On last whorl, keel overlapped by first teleoconch whorl. Terminal varix heavy, high, of sinusigera type.



Figures 1-6.

1-3. *Morula rodgersi* n.sp. Guam, Piti Lagoon, among rocks, 6-9 m.

1-2. Holotype MNHN, 11 mm.

3. Paratype coll. F. Schroeder, 11.8 mm.

4. *M. angulata* (Sowerby, 1893). Guam, Piti Lagoon, among silty dead coral, 1.5-4.6 m, coll. R. Houart, 7.6 mm.

5. *M. cernohorskyi* Houart & Tröndle, 1997. French Polynesia, Tuamotu Archipelago, Mururoa Atoll, holotype MNHN, 6 mm.

6. *M. echinata* (Reeve, 1846). Guam, Piti Lagoon, among dead coral, 3.7 m, coll. R. Houart, 8.2 mm.

Axial sculpture of teleoconch whorls consisting of low, broad varices, each with short spines. Other axial sculpture of numerous growth lamellae. First to third whorls with 8 or 9 varices, fourth with 10 or 11, fifth with 12, last whorl with 9-11. Spiral sculpture of low, broad, squamous cords and numerous threads on and between cords. Two primary cords (P1 and P2) visible on first to fifth whorls; abapical cord P2 partially overlapped by next teleoconch whorl. Last whorl with three squamous spiral cords (P1, P2, P3) and numerous, irregularly shaped, squamous threads on and between cords : 3 or 4 threads between P1 and P2, 5 or 6 between P2 and P3. Space between P1 and P2 smaller than between P2 and P3. Presence of narrow threads on shoulder from second to last whorl : 2 or 3 threads on second whorl; 5-7 on third; 7 or 8 on fourth; 8-10 on penultimate; last whorl with 8 or 9 threads and IS starting from penultimate axial ribs. Short, acute, flattened, open spines produced at intersection of spiral cords and axial varices, giving the shell a spinose appearance.

Aperture small, narrow, ovate. Columellar lip narrow, flaring, with 3 or 4 elongate, weak knobs abapically; rim partially erect, adherent at adapical extremity. Weak parietal tooth. Anal notch broad, deep. Outer lip erect, weakly crenulate, with strong denticles within : ID low, D1-D4 high, gradually smaller and lower abapically. D1 strongest, occasionally splitted. Siphonal canal very short, narrow, straight, weakly dorsally bent at tip, broadly open, with 2 spiral cords and many threads : 6 or 7 threads between P3 and ADP; 4 or 5 between ADP and MP.

Creamy-white or pale tan, occasionally with small brown blotches at base of spines. Aperture white.

Remarks.

From the species cited above, only three may be reasonably compared to the new species, two of them occurring in Guam. *M. angulata* (Agat Bay, Apra Harbor, Piti Lagoon) (Fig. 4) has a more spiny shell

with longer, broader spines, narrower spiral threads, narrower and straighter shoulder, 5 cords on the convex part of the last teleoconch whorl, and 3 on penultimate whorl; IS absent. *M. echinata* (Apra Harbor, Piti Lagoon) (Fig. 6) is comparatively smaller with shorter spines, 5 cords, almost similar in size, on the convex part of the last teleoconch whorl, and one broad cord on shoulder (IP) with orange coloured nodules; the spiral threads are more numerous and narrower. *M. cernohorskyi* (Fig. 5) has 4 spiral cords on the convex part of the last teleoconch whorl, fewer threads, and one broad, light orange coloured cord on shoulder (IP) with broad nodules. *M. parva* is very different and does not need to be compared here. All these species also differ in colour pattern.

Etymology.

At the request of F. Schroeder and H. Conley, the new species is named after Mr. Jim Rodgers of Yigo, Guam, a long-time Guam shell collector.

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REFERENCE

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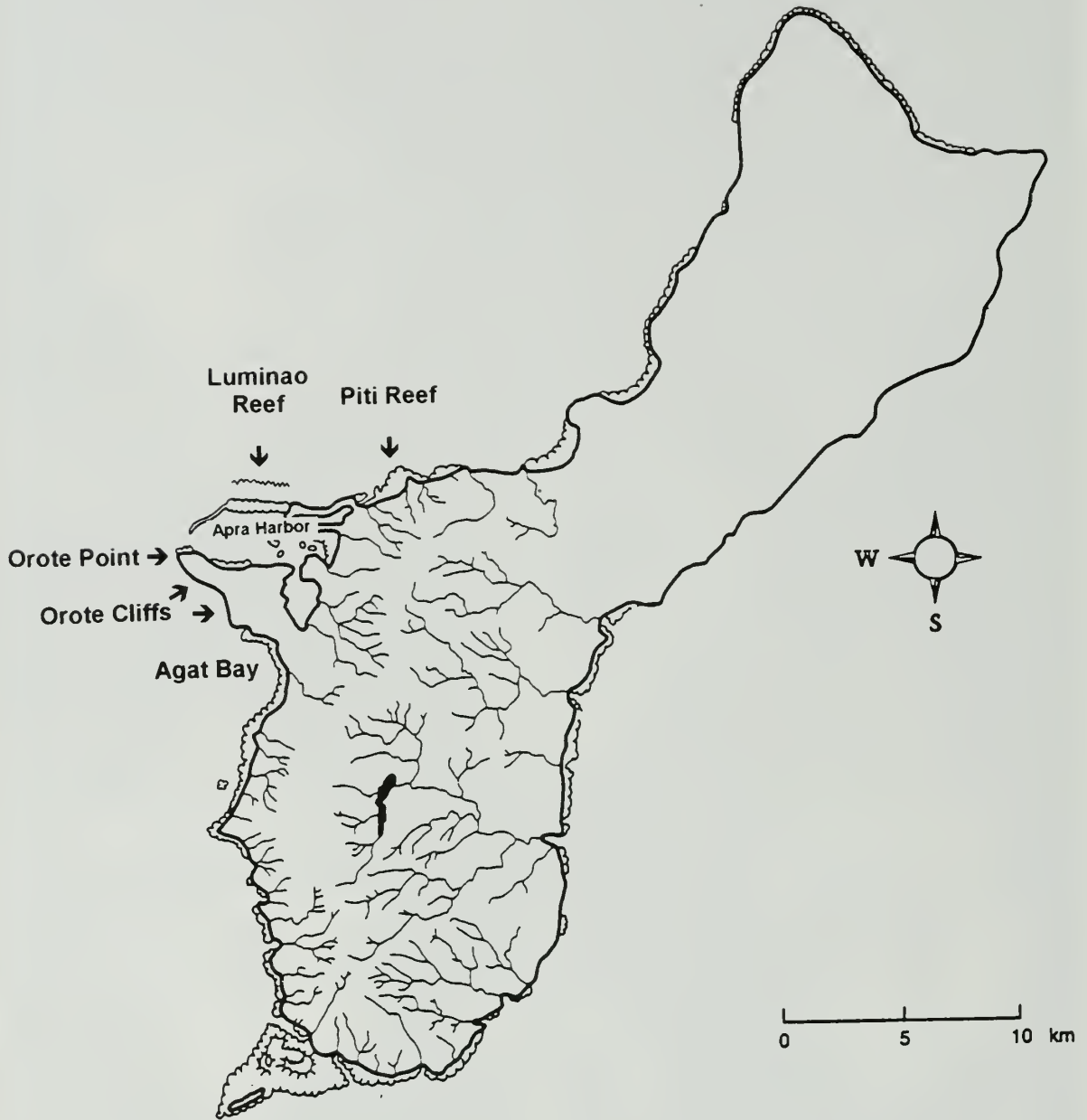


Figure 7. Map of Guam.